Towards better cross-border partnerships in the handling of spatially referenced information

Every local authority in the country is likely to have some form of information or database management system. Many of these systems are not dynamic and do not have the capacity for public engagement or interrogation over the internet. It is also not uncommon to find geographically contiguous districts manipulating policy-related statistics differently, thereby making it difficult to embark on cross-border comparisons. This article presents a review of the issues that underpinned the delivery of the Local Area Statistics Online Service (LASOS) for the South Yorkshire sub-region and some key lessons learnt in the process of developing the system.

Adegbola Ojo, ``University of Sheffield

The Regional Improvement and Efficiency Programme (RIEP)

When the National Improvement and Efficiency Strategy (NIES) was launched in 2007 by the Local Government Association (LGA) and Communities and Local Government (CLG), one of the central driving forces was to devolve functional activities around a set-up of public service delivery partners using a regional model.

This led to the creation of the nine Regional Improvement and Efficiency Partnerships (RIEPs) in April, 2008. RIEPs are constituted by a constellation of councils and public service delivery partners (like health authorities, fire services and the police). In theory, this partnership is supposed to translate into a dynamic force for efficiency in delivery from regional to sub-regional and on to local level. However, due to differences in statutory requirements and expectations, this is not always the case.

It is noteworthy to mention that in their first year alone, RIEPs supported more than 36 local authorities which reported more than £100 million in efficiency gains as against an investment of half that amount (LGA, 2009).

The RIEP strategy for Yorkshire and Humber is facilitated by Local Government Yorkshire and Humber (LGYH). LGYH provided financial support towards the delivery of a sub-regional small area geo-statistical information system (now called LASOS) for the South Yorkshire sub-region comprising Barnsley Metropolitan Borough Council (BMBC), Doncaster Metropolitan Borough Council (DMBC), Rotherham Metropolitan Borough Council (RMBC) and Sheffield City Council (SCC).

Sheffield CC is the project lead for the delivery and management of the project on behalf of the South Yorkshire partners. The steering group for the development of the system therefore comprises representatives of the four local authorities, the NHS, South Yorkshire Police, South Yorkshire Fire and Rescue, Transform South Yorkshire, Bradford MBC and LGYH. Prior to RIEP, the development of LASOS was funded by the Capacity Building Fund (CBF).

Background to LASOS

Quite a number of issues underpin the development of LASOS. First was the realisation by the four districts of the importance of local level information and the geometric increase in the demand for such information. The districts began to realise that policies and decisions affect the citizenry differently at different levels of spatial aggregation and that while it was easier to uncover these variations at higher levels of spatial granularity, it was more difficult to do this at local scales.

Another fundamental issue that triggered the development of the LASOS system was the mounting expectation from the public. Councils are increasingly looking at ways to demonstrate transparency and high level accountability to the public. This can realistically be achieved via better engagement with the public using interactive systems which allow for input-output and feedback mechanisms.

A third driving force for LASOS was the need to synergise the different approaches being employed by councils and indeed their partners. Different local authorities devise different approaches and methods for handling and analysing spatially referenced data which are often used for decision making.

The LASOS project provided an opportunity for partners to work collaboratively, share and learn new methods for handling their datasets. This also contributed towards ensuring greater consistency in the handling and manipulation of information across the sub-region.

The need to interact closely is also driven by the demand for better cross-border collaborations. Often there is a need to compare what works in an area within a district with another district. LASOS presented a unique agenda and opportunity by charting a new course of providing accurate and timely intra and inter-district local level information.

Some challenges and lessons learnt

LASOS is fundamentally a data-driven system. As such, one key demand was to decide on the data themes that would fit into the activities of the partners and allow for flexibility and comparison across the sub-region.

Following rigorous brainstorming through the project steering group, ten data domains were agreed. These include: children and young people; customer insight; demographics; deprivation; economy and enterprise; education, skills and training; environment; health and well-being; housing; and safe and sustainable communities.

The sustainability of data sources was also considered paramount to ensure the longevity of the system especially within the context of comparability of data sources. The Local Area Agreements' (LAAs) indicators proved useful as an initial framework. More interestingly, however, data were also sourced from private sector practitioners and the academic community. Some examples include information on relative income, geodemographics and country of birth.

Once the different partners had begun communicating and sharing knowledge, a more critical challenge was identified. There was need to decide on the methods to deploy on manipulating the datasets prior to loading them on to the system. For instance, the model shown in Figure 1 was developed to link the different geographies from finer spatial scales (like postcodes and output areas)

to detailed levels of aggregation. The arrows show the direction of the links.

Underpinning this linking model was the use of points of population concentration, otherwise known as the population weighted centroids and used after visually inspecting the different geographical boundaries. As is commonly the case, boundaries do not fit because they are often created for different purposes.

Potential and future directions

While it is important to stress that not all datasets on the system at the moment cut across the entire sub-region, a substantial number do, so benchmarking that previously could not be done across neighbourhoods and districts can now be done. Additionally, the system provides room for understanding performance efficiency gains and strengthening the building of a regional capacity for cross-border working and sharing expertise and learning.

Another powerful feature of the system is the fact that it allows for the allocation of different access and user levels. Autonomy can be assigned to partner users allowing them to easily upload and monitor their data. This ensures adequate data security and data protection. Additionally, reports, publications and work areas can be created with relative flexibility.

It is also worth mentioning that the system provides a useful framework for embarking on longitudinal and time series analysis because of the data structures.

LASOS is also characterised by dynamic visualisation tools for maps and charts. Figure 2 shows a screenshot for data mapped at ward level.

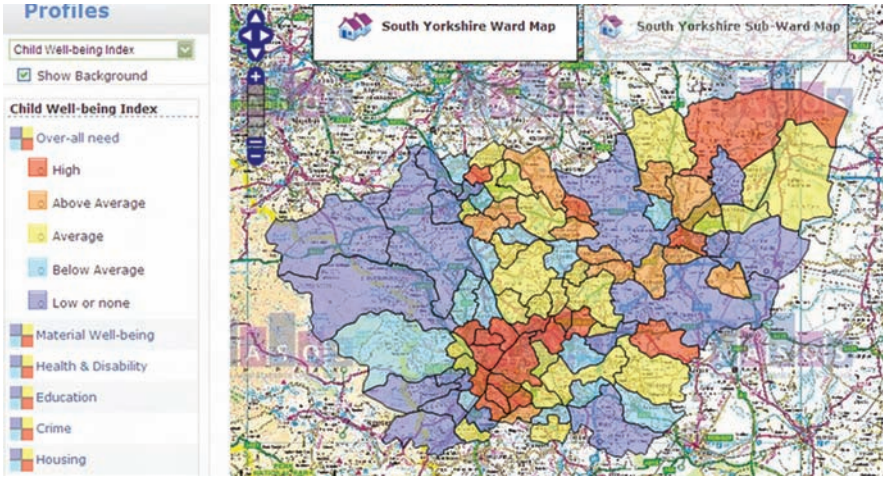

Figure 2. Screenshot of mapped data

In addition to querying data by geographies or via the domains identified earlier, LASOS has also been fortified with a survey creation and management facility which helps partners to create surveys on the fly and manage results with relative ease. Again, administrators of each survey have autonomy on their surveys but are controlled centrally by the systems manager.

In the near future, some analytical capabilities would be embedded within the system to allow users to gain further insight about the datasets. For instance, users would be able to run correlation analysis and visualise results in various formats.

Most of the data on the system can be downloaded in common formats. In the near future datasets will be linked directly to their sources to allow for automatic updates and uploads. This will help create gains in cost or man hours and reduces necessities and demand on central resources.

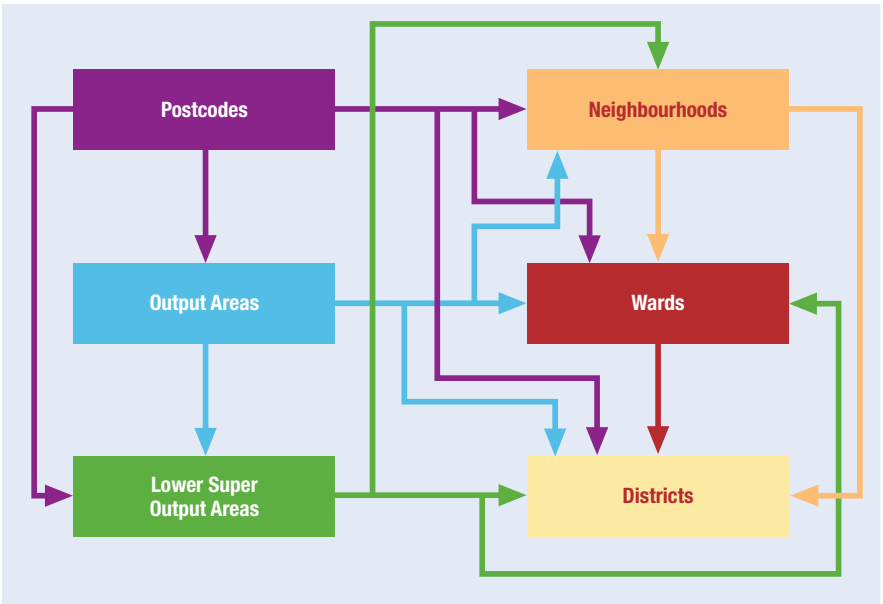

Figure 1: Geography linking model

Conclusions

There is much more to be said about the LASOS system. This article has only summarised the main information and learning outcomes. The system can be accessed by typing www.lasos.org.uk into any internet browser. For feedback, the email address is lasos@sheffield.gov.uk.

It is believed that the successful delivery of this project may spark interest from other local authorities within the region to radically re-consider the ways their spatial statistical datasets are handled. Creating more user-friendly environments is paramount if councils are to increase their engagements with their customers, clients and the public at large.

Does LASOS answer all questions? Certainly not; however, it is where we commence our journey. It is where our understanding, manipulation and visualisation of local level information grow stronger. It is probably a nucleus for the potential roll-out of a regional information systems hub or observatory.

The experiences and partnerships created should be strengthened. Whatever challenges the future presents, the project partners have shown that by working together they can begin to tackle some previously unanswered policy-oriented questions. It is hoped that the painstaking efforts and sincere commitments of the project partners will be sustained.

Reference

LGA (2009) *Regional Improvement and Efficiency Partnerships (RIEPS): One year on*. [Online] http://www.lga.gov.uk/lga/aio/1908547, accessed 20/07/2009.